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PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Dennis T. Drayna	08/18/2011
Changsoo Paul Kang	08/18/2011
Sheikh Riazuddin	08/23/2011

RECEIVING PARTY DATA

Name:	The United States of America, as represented by the Secretary, Department of Health and Human Services	
Street Address:	Office of Technology Transfer, National Institutes of Health	
Internal Address:	6011 Executive Boulevard, Suite 325, MSC 7660	
City:	Bethesda	
State/Country:	MARYLAND	
Postal Code:	20892-7660	

Name:	Centre of Excellence in Molecular Biology together with all allied components, University of Punjab	
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State/Country:	PAKISTAN	
Postal Code:	53700	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13148340

CORRESPONDENCE DATA

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PATENT

REEL: 026834 FRAME: 0578

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ATTORNEY DOCKET NUMBER: BIO.044011/EKM

NAME OF SUBMITTER: John Kilyk, Jr.

Total Attachments: 5

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PATENT REEL: 026834 FRAME: 0579

ASSIGNMENT FOR NIH/FDA INVENTIONS (NIH OR FDA CO-INVENTORS ONLY)

WHEREAS, we, Dennis T. Drayna, and Changsoo Paul Kang, employees of the National Institutes of Health, a component of the United States Department of Health and Human Services having an address at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, MSC 7660, Bethesda, MD 20892-7660, [hereinafter **The Inventors**], have made certain inventions as described and claimed in the U.S. Patent Application having United States Application Number 13/148,340, filed August 8, 2011, and which is entitled "DIAGNOSTIC AND THERAPEUTIC USES OF GNPTAB, GNPTG, AND NAGPA IN STUTTERING" ("U.S. Application") and;

WHEREAS, we are some of the applicants named in the above-identified U.S. Application; and

WHEREAS, the inventions described and claimed therein were made under conditions such as to entitle THE UNITED STATES OF AMERICA, as represented by the Secretary, Department of Health and Human Services [hereinafter THE GOVERNMENT] under Executive Order 10096 and its amendments, 35 USC §§200-201, §§206-207, and §210 and 37 CFR Part 501 to our entire right, title, and interest in such inventions; and

WHEREAS, THE GOVERNMENT is desirous of acquiring all our domestic and foreign right, title, and interest in the inventions described and claimed in the U.S. Application; and

NOW, THEREFORE, having the legal obligation to assign our right, title and interest in the inventions described and claimed in the above-identified patent application to THE GOVERNMENT, having a place of business at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, MSC 7660, Bethesda, MD 20892-7660 and for consideration, the receipt and sufficiency of which are hereby acknowledged, we hereby assign and transfer to THE GOVERNMENT:

our entire right, title, and interest in and to any and all inventions described and claimed in said U.S. Application and any and all Letters Patents which may be granted thereon, and any and all continuations, divisions, reissues or extensions thereof; and

all our rights to claim priority on the basis of said U.S. Application including but not limited to applications filed through the provisions of the Patent Cooperation Treaty ("PCT Applications"); and

all applications for Letters Patents that may be filed for any and all inventions described and claimed in said U.S. Application that may be filed in any foreign country and all Letters Patents that may be granted thereon in any foreign country and all extensions, renewals, and reissues thereof; and

any and all such Letters Patents as may be granted in the United States or any foreign country to be held by THE GOVERNMENT to the end of the term for which the same would have been held by the inventors had this assignment not been made.

we further agree to make, execute, and deliver to **THE GOVERNMENT**, upon request, any and all papers, documents, affidavits, or other instruments that may be necessary in the prosecution of any application or applications for improvements or reissues of Letters Patents, and to assist **THE GOVERNMENT** in every way as may be requested in protecting said inventions.

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IN WITNESS WHEREOF we subscribe our hands and seals on the dates shown below:

Inventor 1:	the dates shown below:
8/18/2011 (Date	Dennis T. Drayna
County of MONTGOMERY	•
State of MARYLAND	· .
Subscribed and sworn to before me this	s 18th day of August 2011
Seal] Jacquelyn T. Sawyer NOTARY PUBLIC Prince George's County State of Maryland My Commission Expires	Notary Public for Maryland My Commission Expires: 1/20/2015

Inventor 2:
8/18/20/1 Chargoo Cag Date Changsoo Paul Kang
County of Montgomery
State of Maryland
Subscribed and sworn to before me this Mithday of Avayst 2011. Jacquelyn T. Sawyer NOTARY PUBLIC Prince George's County State of Maryland My Commission Expires 1/20/2015 My Commission Expires: 1/20/2015
Subscribed and sworn to before me this Kithday of Avgvst , 2011. Subscribed and sworn to before me this Kithday of Avgvst , 2011. Jacquelyn T. Sawyer NOTARY PUBLIC Prince George's County State of Maryland My Commission Expires Notary Public for Maryland

PATENT
Attorney Docket No. 708705
Client Reference No. E-084-2009/0-US-03

Leydig, Voit & Mayer, Ltd. Two Prudential Plaza, Suite 4900 180 North Stetson Avenue Chicago, Illinois 60601-6731

ASSIGNMENT

WHEREAS, I, Sheikh Riazuddin, of Centre of Excellence in Molecular Biology, University of Punjab, have co-invented an invention entitled:

DIAGNOSTIC AND THERAPEUTIC USES OF GNPTAB, GNPTG, AND NAGPA IN STUTTERING

for which invention I have executed an application (non-provisional) for a U.S. patent, which was filed on August 8, 2011, under U.S. Application No. 13/148,340, and

WHEREAS, I am one of the applicants named in the above-identified U.S. Application; and

WHEREAS, the Centre of Excellence in Molecular Biology together with all allied components, University of Punjab, of 87-west Canal Bank Road, Thokar Niaz, Baig, Lahore, Pakistan 53700, hereinafter referred to as Assignee, is desirous of acquiring my entire domestic and foreign right, title, and interest in and under the invention described in the patent application.

Now, Therefore, for good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, I assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns my full and exclusive rights in and to the invention in the U.S. and every foreign country and my entire right, title, and interest in and to the patent application and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, reexaminations, National phase applications, including petty patent applications, and utility model applications) that may be filed in the United States and every foreign country on the invention, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon, and I do hereby authorize and request the Commissioner of Patents to issue U.S. patents to the abovementioned Assignee agreeably with the terms of this assignment document.

I HEREBY AUTHORIZE the Assignee to insert in this assignment document the filing date and application number of the application if the date and number are unavailable at the time this document is executed.

UPON SAID CONSIDERATION, I convey to the Assignee the right to make application in its own behalf for protection of the invention in the U.S. and countries foreign to the U.S. and to claim under the Patent Cooperation Treaty, the International Convention and/or other international arrangement for any such application the date of the U.S. application (or any other application on the invention) to gain priority with respect to other applications.

I DO HEREBY COVENANT and agree with the Assignee that I will not execute any writing or do any act whatsoever conflicting with the terms of this assignment document set forth herein, and that I will at any time upon request, without further or additional consideration, but at the expense of the Assignee, execute such additional assignments and other writings and do such

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In re Appln. of Drayna et al. U.S. Patent Application No. 13/148,340

additional acts as the Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this assignment, and render all necessary assistance in making application for and obtaining original, continuation, continuation-in-part, divisional, reissued, reexamined, and National phase patents of the U.S. or of any and all foreign countries on the invention, and in enforcing any rights or choses in action accruing as a result of such applications or patents, and by executing statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of all parties hereto.

Sheikh Riazuddin

Date August 23, 2011

Date August 23, 2011

Witness MUHAMMAD ZAMAN KHAN ASSIR

Witness Muhammad Ejaz Malik